



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,281	12/13/2001	Geping Chen	10360-090001	3585
26161	7590	11/30/2005	EXAMINER	
FISH & RICHARDSON PC P.O. BOX 1022 MINNEAPOLIS, MN 55440-1022			NGUYEN, STEVEN H D	
			ART UNIT	PAPER NUMBER
			2665	

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/023,281	Applicant(s) CHEN, GEPING	
	Examiner Steven HD Nguyen	Art Unit 2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/13/01.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 5, 15 and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As claims 5, 15 and 25, line 2, 'the predetermined time delay' is vague and indefinite because it does not refer to any previous elements.

There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Chen (IEEE).

Regarding claims 1, 11 and 21, Chen discloses an apparatus (Fig 1) for serving data units on a network comprising a first buffer (Fig 1, ref H-Cells) to queue data units from a first application; a second buffer (Fig 1, Ref L-cells) to queue data units from a second application; and a controller to (i) move data units from the second buffer to the first buffer following a predetermined delay (Pages 1038-1039, Sec 2, Description of the scheduling policy and Sec 3,

Art Unit: 2665

Implementation), and (ii) serve data units from the first buffer (Fig 1, ref S for serving the H-cells, See Pages 1038-1040; Sec 2, Description of the scheduling policy and Sec 3, Implementation).

Regarding claims 2, 12 and 22, Chen discloses the data units from the first application have a higher priority for transmission on the network than the data units from the second application (Fig 1, H-cells are higher priority and L-cells are low priority).

Regarding claims 3, 13 and 23, Chen discloses the data units from the first application and the data units from the second application are served from the first buffer on a first-come-first-served basis (Fig 1, ref S for serving the H-cells, See Pages 1038-1040; Sec 2, Description of the scheduling policy and Sec 3, Implementation).

Regarding claims 4, 14 and 24, Chen discloses the controller discards data units from the first application that exceed a first time delay, and discards data units from the second application that exceed a second time delay (See Pages 1038-1040; Sec 2, Description of the scheduling policy and Sec 3, Implementation).

Regarding claims 5, 15 and 25, Chen discloses the second time delay exceeds the predetermined time delay (See Pages 1038-1040; Sec 2, Description of the scheduling policy and Sec 3, Implementation).

Regarding claims 6, 16 and 26, Chen discloses the data units from the second buffer are moved to an end of the first buffer after data units from the first application (See Pages 1038-1040; Sec 2, Description of the scheduling policy and Sec 3, Implementation).

Regarding claims 7, 17 and 27, Chen discloses the controller determines a time to move the data units from the second buffer to the first buffer (See Pages 1039-1040; Sec 3, Implementation, timer used to determine a time when L-cells are moved to the H-buffer).

Regarding claims 8, 18 and 28, Chen discloses the controller uses a circular buffer, a pointer and a timer to determine the time to move the data units from the second buffer to the first buffer (See Pages 1039-1040; Sec 3, Implementation, Fig 2, timer for determining when L-cells are moved to the H-buffer).

Regarding claims 9, 19 and 29, Chen discloses the controller serves data units from the second buffer when the first buffer is empty (See Pages 1038-1040; Sec 2, Description of the scheduling policy, Par A and Sec 3, Implementation, left column, L-cells join the L-buffer which is served only when the H-buffer is empty).

Regarding claims 10, 20 and 30, Chen discloses the data units comprise Asynchronous Transfer Mode (ATM) cells and the network comprises an ATM network (See Abstract and Pages 1037-1038; Sec 1, Introduction).

5. Claims 1-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Stavrakakis (Performance Evaluation).

Regarding claims 1, 11 and 21, Stavrakakis discloses an apparatus (Fig 1) for serving data units on a network comprising a first buffer (Fig 1, ref H-Cells) to queue data units from a first application; a second buffer (Fig 1, Ref L-cells) to queue data units from a second application; and a controller to (i) move data units from the second buffer to the first buffer following a predetermined delay (Pages 40-43, Sec 2, Description of the scheduling policy and

Art Unit: 2665

Sec 3, Implementation), and (ii) serve data units from the first buffer (Fig 1, ref S for serving the H-cells, Pages 40-43, Sec 2, Description of the scheduling policy and Sec 3, Implementation).

Regarding claims 2, 12 and 22, Stavrakakis discloses the data units from the first application have a higher priority for transmission on the network than the data units from the second application (Fig 1, H-cells are higher priority and L-cells are low priority).

Regarding claims 3, 13 and 23, Stavrakakis discloses the data units from the first application and the data units from the second application are served from the first buffer on a first-come-first-served basis (Fig 1, ref S for serving the H-cells, Pages 40-43, Sec 2, Description of the scheduling policy and Sec 3, Implementation).

Regarding claims 4, 14 and 24, Stavrakakis discloses the controller discards data units from the first application that exceed a first time delay, and discards data units from the second application that exceed a second time delay (Pages 40-43, Sec 2, Description of the scheduling policy and Sec 3, Implementation).

Regarding claims 5, 15 and 25, Stavrakakis discloses the second time delay exceeds the predetermined time delay (Pages 40-43, Sec 2, Description of the scheduling policy and Sec 3, Implementation).

Regarding claims 6, 16 and 26, Stavrakakis discloses the data units from the second buffer are moved to an end of the first buffer after data units from the first application (Pages 40-43, Sec 2, Description of the scheduling policy and Sec 3, Implementation).

Regarding claims 7, 17 and 27, Stavrakakis discloses the controller determines a time to move the data units from the second buffer to the first buffer (See Pages 41-43; Sec 3, Implementation, timer used to determine a time when L-cells are moved to the H-buffer).

Regarding claims 8, 18 and 28, Stavrakakis discloses the controller uses a circular buffer, a pointer and a timer to determine the time to move the data units from the second buffer to the first buffer (See Pages 41-43; Sec 3, Implementation, Fig 2, timer for determining when L-cells are moved to the H-buffer).

Regarding claims 9, 19 and 29, Stavrakakis discloses the controller serves data units from the second buffer when the first buffer is empty (See Pages 40-43; Sec 2, Description of the scheduling policy, Par 1 and Sec 3, Implementation, left column, L-cells join the L-buffer which is served only when the H-buffer is empty).

Regarding claims 10, 20 and 30, Stavrakakis discloses the data units comprise Asynchronous Transfer Mode (ATM) cells and the network comprises an ATM network (See Abstract and Pages 40-43; Sec 1, Introduction).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Duong Van (USP 6,600,752) discloses an ATM network has an apparatus which comprises a high priority queue and low priority queue wherein the packets at the low priority queue are moved to the high priority queue for transmitting on the network.

Yao (IEEE) discloses a packet network has an apparatus which comprises a high priority queue and low priority queue wherein the packets at the low priority queue are moved to the high priority queue for transmitting on the network.


Art Unit: 2665

Ruszczuk (USP 6205150) a packet network has an apparatus which comprises a high priority queue and low priority queue wherein the packets at the low priority queue are moved to the high priority queue for transmitting on the network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven HD Nguyen whose telephone number is (571) 272-3159. The examiner can normally be reached on 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D. Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Steven HD Nguyen
Primary Examiner
Art Unit 2665
November 23, 2005